

U.S. Serial No. 10/060,247  
Reply to Official Action dated June 19, 2003

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 25-31 are presently active in this case. Claims 1-24 canceled, Claim 25 amended and Claims 28-30 added by the present Amendment.

In the outstanding Official Action the title was objected to as not being descriptive and Claims 18 and 23-27 were rejected under 35 USC §103(a) as being unpatentable over Tanaka et al (US Patent App. No. 2001/0040781 A1) in view of Yoshikawa et al (JP 11-154609) and Meguro et al (IEEE Trans. Mag., 35(5), 1999, 2925-2927).

In response to the objection to the title, the title has been amended to be more descriptive of the claimed invention. Accordingly, the objection to the title is believed to have been overcome.

In light of the outstanding rejection on the merits, Claim 25 has been amended to clarify that according to the claimed invention the ferromagnetic layers are ferromagnetically coupled. This feature is supported at page 50, lines 5-7 of page 50 of the specification. Also, new Claims 28-31 are added, finding support in Applicants' disclosure of Figures 1-4, page 51, lines 18-23 and page 59, lines 3-6 of the specification. No new matter has been added.

In light of the present amendment and clarification brought to the claimed invention, Applicants respectfully submit that the outstanding rejection on the merits has been overcome, because the references of record include merely disparate teachings that are not combinable absent hindsight, and in any event do not render the claimed invention obvious.

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In particular, Tanaka et al., disclose a spin valve thin film magnetic device in which elements 32-34 are formed on both sides of a stack including a magnetization pinned layer, a nonmagnetic intermediate layer and a magnetization free layer. Accordingly, a sense current flows in the plane direction of the stack (i.e., current-in-plane type). Therefore, the mode of operation of the Tanaka et al. device clearly differs from the current-perpendicular-to-plane-type magnetoresistive device of Applicants' invention and Tanaka et al. and therefore not believed to be relevant.

Yoshikawa et al. merely disclose a soft magnetic thin film used for a recording magnetic pole of a magnetic head. Yoshikawa et al. do not disclose using an Fe-rich alloy for a current-perpendicular-to-plane-type magnetoresistive device reproducing head. Accordingly, the Yoshikawa et al. reference is not believed to cure the deficiencies of the Tanaka et al. reference.

Meguro et al. merely disclose Co/Ru/Co trilayered films in which Co layers are coupled antiferromagnetically. Meguro et al. do not disclose a "ferromagnetically coupled" laminate structure as in Applicants' invention. Further, Meguro et al. do not disclose using an Fe-rich alloy, or mention a current-perpendicular-to-plane-type magnetoresistive device. Accordingly, the Meguro et al. reference is not believed to cure the deficiencies of the Tanaka et al. and Yoshikawa et al. references.

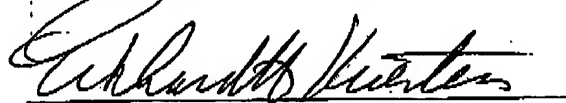
Therefore, even if these references are combined, the combined teachings of the references are not believed to render obvious the claimed structure of Applicants' invention. Furthermore, there is no incentive absent hindsight to combine the teachings of the three references, a clear requirement to sustain a rejection under 35 USC §103.

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Accordingly, the outstanding rejection is traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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